D8

16. (Amended) An isolated or purified heptahelix receptor having an amino acid sequence comprising the sequence of SEQ ID NO:2.

Please add new claims 38-49 as follows:

-- 38. (New) An isolated or purified heptahelix receptor encoded by a nucleic acid sequence present in plasmid clone Lyme21-9.

39. (New) The heptahelix receptor of claim 38, wherein the receptor is encoded by a sequence present in SEQ ID NO:1.

D9

40. (New) An isolated or purified leukotriene B4 receptor encoded by a nucleic acid sequence present in plasmid clone Lyme21-9.

41. (New) The receptor of claim 40, wherein the receptor is encoded by a nucleic acid sequence present in SEQ ID NO:1.

42. (New) The receptor of claim 16, wherein the receptor has an amino acid sequence consisting of the sequence of SEQ ID NO:2.

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43. (New) The receptor of claim 16, wherein the receptor is encoded by a nucleic acid sequence present in SEQ ID NO:1.

44. (New) The receptor of claim 16, wherein the receptor is a recombinant receptor.

45. (New) A method for assaying a ligand or an antagonist or agonist for said ligand, said method comprising:

providing a heptahelix receptor encoded by a nucleotide sequence present in plasmid clone Lyme21-9;

incubating the receptor with a test sample suspected of containing the ligand, antagonist, or agonist; and

detecting binding between the receptor and the ligand, antagonist, or agonist.

46. (New) The method of claim 45, wherein the ligand is leukotriene B4.

47. (New) The method of claim 46, wherein the sample contains an antagonist of leukotriene B4, which reduces binding of leukotriene B4 to the receptor.

48. (New) The method of claim 45, wherein the heptahelix receptor is expressed on an cellular membrane of a host cell transfected or transduced with DNA encoding the receptor.

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